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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,601	09/10/2004	Michael Stosser	258516US0PCT	4906
22850 7590 09/26/2007 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER KEYS, ROSALYND ANN	
			ART UNIT 1621	PAPER NUMBER
			NOTIFICATION DATE 09/26/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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**Office Action Summary**

Application No.

10/506,601

Applicant(s)

STOSSER ET AL.

Examiner

Rosalynd Keys

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 June 2007.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-6 and 8-15 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1, 3-6 and 8-15 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Status of Claims***

1. Claims 1, 3-6 and 8-15 are pending.

Claims 1, 3-6 and 8-15 are rejected.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 6 is rejected under 35 U.S.C. 112, first paragraph, for the reasons given in the previous office action, mailed March 26, 2007.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1, 3-5, and 8-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vogel et al. (US 5,004,478) in view of Combs et al. (US 6,821,308 B2), for the reasons given in the previous office action, mailed March 26, 2007.

#### **Response to Arguments**

##### Rejection of claims 1, 3-5, and 8-15 under 35 U.S.C. 103(a) as being unpatentable over Vogel et al. (US 5,004,478) in view of Combs et al. (US 6,821,308 B2)

8. Applicant's arguments filed June 26, 2007 have been fully considered but they are not persuasive.

The Applicants argue that Vogel et al. do not disclose that the polyethers contain unsaturated compounds in an amount of 8mol-% to 30 mol-%.

This argument is not persuasive because as pointed out in the previous office action the Examiner believes that based upon the teaching of Combs et al. one having ordinary skill in the art at the time the invention was made would reasonably believe that the polyethers disclosed in Vogel et al. have unsaturation levels of at least 6 mole percent (see column 3, lines 20-33 of Combs et al.).

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The Applicants argue that Vogel et al. do not disclose how the polyethers are obtained.

This argument is not persuasive because as pointed out in the previous office action the instant claims are directed to product-by-process claims, which are limited by and defined by the process, nonetheless the determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Thus, since the instant claims are directed to a polyether which is made by reacting a 1-butene oxide with an alcohol and the polyethers of Vogel et al. are made by reacting a butene oxide and an alcohol (see column 3, lines 23-40), then the polyethers produced by Vogel et al. appear to be the same as or obvious from the instant polyethers.

The Applicants argue that Vogel et al. fail to disclose which compounds are used as substrates.

The Examiner disagrees in column 3, lines 19-40, Vogel et al. teach that suitable starter molecules for the polyalkylene oxides are aliphatic and aromatic mono-, di-, or polyalcohols or even amines or amides and alkylphenols; and that preferred olefin oxides for suitable polyethers are propylene oxide and butene oxides and mixtures thereof. Thus, the skilled artisan would have found it obvious to select any of the disclosed starters and alcohols for preparing the desired polyethers.

The Applicants argue that Vogel et al. fail to disclose that catalysts are present in the preparation procedure.

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This argument is not persuasive because as pointed out in the previous office action Combs et al. teach that polyoxyalkylene monoethers are normally made by basic catalysis (see column 3, lines 16-22). Further, Combs et al. disclose that Vogel et al. disclose oxyalkylene units which are derived from C4 epoxides (see column 1, lines 47-49) and further down in that same column Combs et al. disclose that polyoxyalkylene monoethers made with C3 and higher alkylene oxides contain a second type of impurity: alkoxylated unsaturates, a side reaction which occurs during base catalyzed polymerization of many alkylene oxides (see column 1, line 13 to column 2, line 9). Thus, the Examiner concluded that based upon the teachings of Combs et al. one having ordinary skill in the art at the time the invention was made would reasonably believe that the polyethers of Vogel et al. are prepared via base catalysis, since Combs et al. teach that base catalysis is the normal means by which polyoxyalkylene monoethers are prepared and implies that Vogel et al. is a prior art reference, which utilized this conventional means.

The Applicants argue that Combs et al. cannot teach that the polyethers that are presented in Vogel et al. are prepared by basic catalysis because although Vogel et al. is a reference that is cited in Combs et al., this does not mean that the polyalkylene oxides that are disclosed in Vogel et al. are prepared by basic catalysis, because nothing points in the direction of basic catalysis for the preparation of the compounds described in Vogel et al.

The Examiner disagrees. Combs et al. disclose that Vogel et al. is directed to polyoxyalkylene monoethers derived from C4 epoxides (see column 1, lines 47-49). Further down in column 1 through to lines 10 of column 2, Combs et al. teach that unsaturates are an impurity present in polyoxyalkylene monoethers made from C3 and higher alkylene oxides and that these unsaturates are produced as a side reaction in base catalyzed reactions. Thus, since Combs et al. discuss the fact that Vogel et al. disclose polyoxyalkylene monoethers derived from C4 epoxides (a C3 and higher alkylene oxide) in close proximity to the teaching that

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unsaturates are an impurity present in polyoxyalkylene monoethers made from C3 and higher alkylene oxides, the skilled artisan would reasonably conclude that Combs et al. believed Vogel et al. to have used base catalysis for preparing their polyethers.

The Applicants argue that Vogel et al. cannot suggest these polyether mixtures, because the reference does not mention the presence of unsaturated compound at all.

This argument is not persuasive because as pointed out above and in the previous office action the Examiner believes that based upon the teaching of Combs et al. one having ordinary skill in the art at the time the invention was made would reasonably believe that the polyethers disclosed in Vogel et al. have unsaturation levels of at least 6 mole percent (see column 3, lines 20-33 of Combs et al.).

The Applicants argue that Vogel et al. preferably use propylene oxide as the alkylene oxide, and therefore, a person of ordinary skill in the art would not take Vogel et al. into account looking for a polyether mixture specified in Claim 1 of the present application.

This argument is not persuasive because a prior art disclosure is not limited to its working examples or to its preferred embodiments, but must be evaluated for what it teaches those of ordinary skill in the art. Merck & Co. Inc. v. Biocraft Labs. Inc., 874 F.2d 804, 807, 10 USPQ2d 1843, 1846 (Fed. Cir. 1989); In re Fracalossi, 681 F.2d 792, 794 n.1, 215 USPQ 569, 570 n.1 (CCPA 1982); In re Lambertj, 545 F.2d 747, 750, 192 USPQ 278, 280 (CCPA 1976); In re Boe, 355 F. 2d 961, 965, 148 USPQ 507, 510 (CCPA 1966). In the instant case, Vogel et al. teach that butene oxide is a suitable alkylene oxide for preparing polyether (see column 3, lines 23-25).

The Applicants argue that Combs et al. teach that polyalkylene oxides that are prepared in the presence of DMC-catalyst have low amounts of unsaturates. Thus, a person of ordinary skill in the art would not learn from this disclosure that the specific combination of 1-

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butene oxide, an alcohol and a DMC-catalyst gives rise to polyether mixtures having amount of unsaturates of 8 mol-% to 30 mol-%, as specified in Claim 1.

This argument is not persuasive because 1) the Applicants only show this to be true when the initiator is tridecanol (see Table 1 on page 13) and 2) the claims are directed to a product not a process (see discussion above with respect to a product-by-process).

For at least the above reasons, this rejection is maintained.

Rejection of claim 6 under 35 U.S.C. 112, first paragraph

9. Applicant's arguments filed June 26, 2007 have been fully considered but they are not persuasive.

10. The Applicants argue that Eleveld et al. do not disclose a process in which alcohols having 2 to 24 carbon atoms are alkoxyated with 1-butene oxide. This argument is not persuasive because Eleveld et al. teach polymerization of an alkylene oxide with a hydroxyl group containing initiator in the presence of a DMC catalyst. Alcohols are hydroxyl group containing initiator. The Applicants arguments with respect to Combs et al. has also been considered but are not persuasive because the Examiner used the Eleveld et al. and Combs et al. references to show that the ordinary skilled artisan would reasonably expect that compounds prepared with an alcohol and a butene oxide in the presence of a DMC catalyst would be expected to obtain polyethers having very low unsaturation, namely less about 3 mol% (see column 9, lines 7-37 of Eleveld et al. and column 2, line 41 to column 3, line 50 of Combs et al.). Thus, based upon the teaching of the prior art the skilled artisan would not reasonably expect to obtain a polyether having the claimed content of unsaturated components when one reacts an alkylene oxide, including 1-butene oxide, with any other alcohol other than tridecanol, in the presence of a dmc catalyst. Thus, since the instant specification only discloses examples wherein the initiator is tridecanol, the catalyst is dmc, the alkylene oxide is 1-butene oxide and the unsaturation content ranges from 14.1 to 28.8 (see Table 1 on page 13), the showing is not



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commensurate in scope. Thus, when one considers the instant invention in light of the teachings of the prior art, the ordinary skill artisan would not reasonably believe that one could obtain polyethers having the claimed content of unsaturated components using an alcohol as disclosed in claim 6.

For at least the above reasons, this rejection is maintained.

### **Conclusion**

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosalynd Keys whose telephone number is 571-272-0639. The examiner can normally be reached on M, R & F 5:30-7:30 am & 1-5 pm; T & W 5:30 am-4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler can be reached on 571-272-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rosalynd Keys/  
Primary Examiner  
Art Unit 1621

September 16, 2007